3.5.1.1 Pipette 100.0 mL of 1 M sodium sulfite into a stirred 250-mL beaker.

3.5.1.2 Using a standardized pH meter, measure and record the pH. The pH should be around 10. It is not essential the pH be 10; however, it is essential that the value be accurately recorded.

3.5.1.3 To the stirring Na_2SO_3 solution, pipette in 10.0 mL of Formaldehyde Standard Solution. The pH should rise sharply to about 12.

3.5.1.4 Using the pH meter as a continuous monitor, titrate the solution back to the original exact pH using 0.100 N HCl. Record the milliliters of HCl used as titrant. (NOTE: Approximately 30 to 35 mL of HCl will be required.)

3.5.1.5 Calculate the concentration of the Formaldehyde Standard Solution using the equation as follows:

$$\%\text{HCHO} = \frac{(\text{mL HCl})\ (\text{N HCl})\ (3.003)}{\text{mL sample}}$$

3.6 Procedure.

3.6.1 Prepare a sufficient quantity of crushed ice for three determinations (two trays of cubes).

3.6.2 Put 70 cc of 1 M Na_2SO_3 solution into a 400-mL beaker. Begin stirring and add approximately 100 g of crushed ice and 2 g NaCl. Maintain 0 °C during the test, adding ice as necessary.

3.6.3 Add 10–15 drops of thymolphthalein indicator to the chilled solution. If the solution remains clear, add 0.1 N NaOH until the solution turns blue; then add 0.1 N HCl back to the colorless endpoint. If the solution turns blue upon adding the indicator, add 0.1 N HCl to the colorless endpoint.

3.6.4 On the analytical balance, accurately weigh a sample of Formaldehyde Standard Solution as follows.

3.6.4.1 Pour about 0.5 inches of Formaldehyde Standard Solution into a 5-oz. plastic cup.

3.6.4.2 Determine the gross weight of the cup, Formaldehyde Standard Solution, and a disposable pipette fitted with a small rubber bulb.

3.6.4.3 Pipette approximately 5 g of the Formaldehyde Standard Solution into the stirring, chilled Na_2SO_3 solution.

3.6.4.4 Quickly reweigh the cup, Formaldehyde Standard Solution, and pipette with the bulb.

3.6.4.5 The resultant weight loss equals the grams of Formaldehyde Standard Solution being tested.

3.6.5 Rapidly titrate the solution with 0.1 N HCl to the colorless endpoint in Step 3 (3.6.3).

3.6.6 Repeat the test in triplicate.

3.7 Calculation for Formaldehyde Standard Solution.

3.7.1 The percent free-formaldehyde (% HCHO) is calculated as follows:

$$\%\text{HCHO} = \frac{(\text{mL 0.1 N HCl})(\text{N Acid})(3.003)}{\text{Weight of Formaldehyde Standard Solution}}$$

3.7.2 The range of the results of three tests should be no more than ±5 percent of the actual Formaldehyde Standard Solution concentration. Report results to two decimal places.

3.8 Reference.

West Coast Adhesive Manufacturers Trade Association Test 10.1.

APPENDIX B TO SUBPART HHHH OF PART 63—METHOD FOR THE DETERMINATION OF LOSS-ON-IGNITION

1.0 Purpose

The purpose of this test is to determine the loss-on-ignition (LOI) of wet-formed fiberglass mat.

2.0 Equipment

2.1 Scale sensitive to 0.001 gram (g).

2.2 Drying oven equipped with a means of constant temperature regulation and mechanical air convection.

2.3 Furnace designed to heat to at least 625 °C (1,157 °F) and controllable to ±25 °C (±45 °F).

2.4 Crucible, high form, 250 milliliter (mL).

2.5 Desiccator.

2.6 Pan balance (see Note 2 in 4.9)

3.0 Sample Collection Procedure

3.1 Obtain a sample of mat in accordance with Technical Association of the Pulp and Paper Industry (TAPPI) method 1007 ''Sample Location.''

3.2 Use a 5- to 10-g sample cut into pieces small enough to fit into the crucible.

3.3 Place the sample in the crucible. (NOTE 1: To test without the use of a crucible, see Note 2 after Section 4.8.)

3.4 Condition the sample in the furnace set at 105 ±3 °C (221 ±9 °F) for 5 minutes ±30 seconds.

4.0 Procedure

4.1 Condition each sample by drying for 5 minutes ±30 seconds at 105 ± 3 °C (22 ± 5 °F).

4.2 Remove the test sample from the furnace and cool in the desiccator for 30 minutes in the standard atmosphere for testing glass textiles.

4.3 Place the empty crucible in the furnace at 625 ±25 °C (1,157 ±45 °F). After 30 minutes, remove and cool the crucible in the standard atmosphere (TAPPI method 1008) for 30 minutes.

4.4 Identify each crucible with respect to each test sample of mat.

4.5 Weigh the empty crucible to the nearest 0.001 g. Record this weight as the tare mass, T.

4.6 Place the test sample in the crucible and weigh to the nearest 0.001 g. Record this weight as the initial mass, A.

4.7 Place the test sample and crucible in the furnace and ignite at 625 ±25 °C (1,157 ±45 °F).

4.8 After ignition for at least 30 minutes, remove the test sample and crucible from the furnace and cool in the desiccator for 30 minutes in the standard atmosphere (TAPPI method 1008).

4.9 Remove each crucible, and test each sample separately from the desiccator, and immediately weigh each sample to the nearest 0.001 g. Record this weight as the ignited mass, B. (NOTE 2: When it is known that no ash residue separates from the test sample during the weighing and igniting processes, you may weigh the sample separately without the crucible. When this occurs, the tare mass (T) equals zero. With appropriate care, you can dry and weigh a single piece of mat and place with tongs into the ignition oven on appropriate refractory supports. When the ignition time is over, remove the sample as an intact fragile web and weigh it directly on a pan balance.)

5.0 Calculation

5.1 Calculate the LOI for each sample as follows:

$$\% \text{ LOI} = 100 \times (A - B)/(A - T)$$

Where:

A = initial mass of crucible and sample before ignition (g);

B = mass of crucible and glass residue after ignition (g); and

T = tare mass of crucible, (g) (see Note 2).

5.2 Report the percent LOI of the glass mat to the nearest 0.1 percent.

6.0 Precision

The repeatability of this test method for measurements on adjacent specimens from the same sample of mat is better than 1 percent.

Subpart IIII—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks

SOURCE: 69 FR 22623, April 26, 2004, unless otherwise noted.

WHAT THIS SUBPART COVERS

§ 63.3080 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for facilities which surface coat new automobile or new light-duty truck bodies or body parts for new automobiles or new light-duty trucks. This subpart also establishes NESHAP for facilities which surface coat new other motor vehicle bodies or body parts for new other motor vehicles which you choose to include in your affected source pursuant to §63.3082(c). This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

[71 FR 76926, Dec. 22, 2006]

§ 63.3081 Am I subject to this subpart?

(a) Except as provided in paragraph (c) of this section, the source category to which this subpart applies is automobile and light-duty truck surface coating.

(b) You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in §63.3082, that, except as noted in paragraph (b)(1) of this section, is located at a facility which applies topcoat to new automobile or new light-duty truck bodies or body parts for new automobiles or new light-duty trucks, and that is a major source, is located at a major source, or is part of a major source of emissions of hazardous air pollutants (HAP). You are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in §63.3082, in which you choose to include, pursuant to §63.3082(c), any coating operations which apply coatings to new other motor vehicle bodies or body parts for new other motor vehicles;